



“We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard ... because that goal will serve to organize and measure the best of our energies and skills.”

President John F. Kennedy
Sept. 12, 1962

THE TRIP TO THE MOON

On July 16, 1969, Apollo 11 blasted off from Cape Kennedy, Florida, carrying Commander Neil Armstrong, Command Module Pilot Michael Collins and Lunar Module Pilot Edwin “Buzz” Aldrin. Fours days later, at 10:56 p.m. EDT, an estimated 530 million people watched Armstrong as he took “... one small step for a man, one giant leap for mankind.”

The three astronauts spent most of the 237,000-mile trip in the Command Module *Columbia*, which would also be used to return them to Earth. At 218 cubic feet, the living space inside *Columbia* was about that of a modern cargo van.

Just four months later, Apollo 12 landed the second set of Americans on the moon. Commander Pete Conrad and Lunar Module Pilot Alan Bean spent much more time on the surface of the moon than the crew of Apollo 11 (1 day, 7 hours compared to just 2 hours, 31 minutes) while collecting much more data on the makeup of its surface.



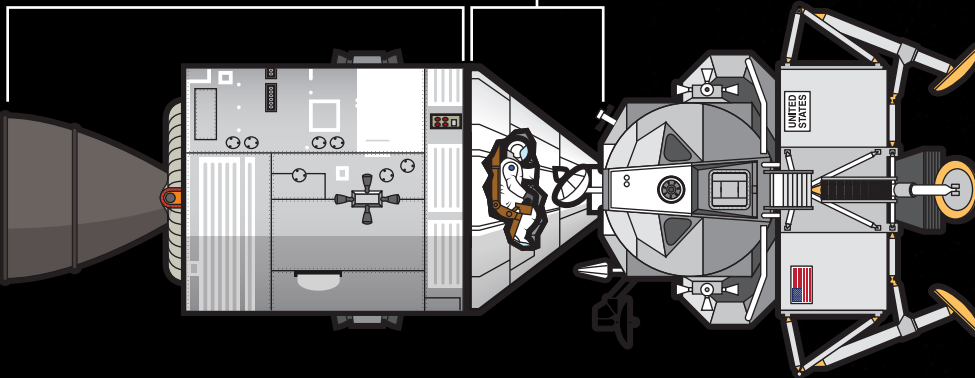
Apollo 11 crew: Neil Armstrong, Michael Collins and Edwin “Buzz” Aldrin.

Service Module

Propulsion, electricity, environmental controls and water and food storage.

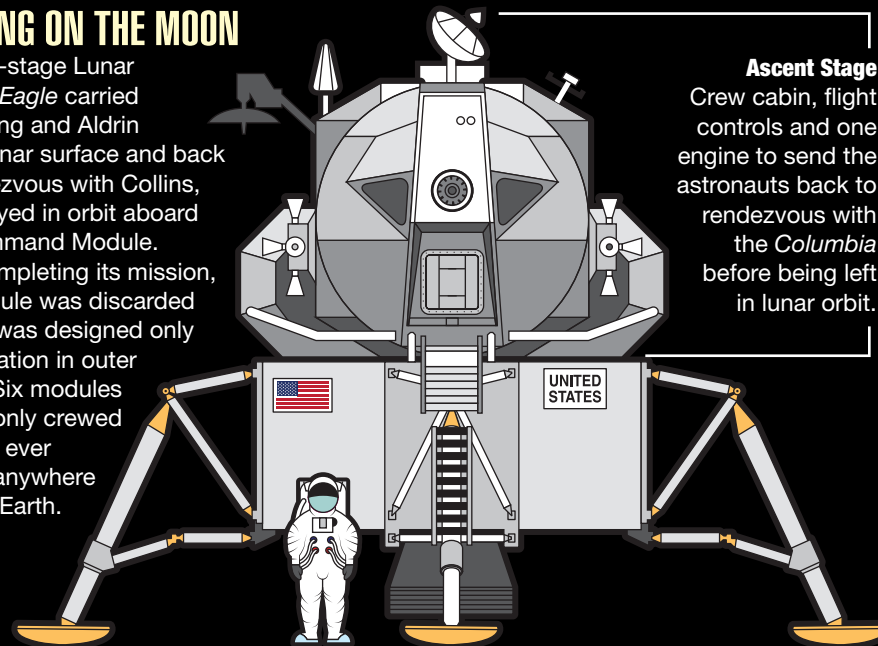
Command Module “Columbia”

Living space, flight controls and equipment needed for reentry and splashdown.



LANDING ON THE MOON

The two-stage Lunar Module *Eagle* carried Armstrong and Aldrin to the lunar surface and back to rendezvous with Collins, who stayed in orbit aboard the Command Module. After completing its mission, the module was discarded since it was designed only for operation in outer space. Six modules are the only crewed vehicles ever to land anywhere beyond Earth.



Ascent Stage
Crew cabin, flight controls and one engine to send the astronauts back to rendezvous with the *Columbia* before being left in lunar orbit.

Descent Stage: The lower half of the module had a single engine to facilitate a powered landing on the surface of the moon. When the excursion ended, it served as the launch pad for the ascent stage and was left on the moon.



MISSION PATCH

Unlike any previous Apollo mission patch, Apollo 11’s did not include the names of the crew members. NASA decided that the first lunar landing belonged to everyone, not just the crew.

BIGGEST ROCKET EVER

The Saturn V remains the tallest (363 feet), heaviest (over 6.6 million pounds) and most powerful rocket ever flown. Boeing, North American Aviation, Douglas Aircraft Company and IBM were its lead contractors.

ONE SMALL STEP

50TH ANNIVERSARY
OF MAN’S FIRST
WALK ON THE MOON

ESCAPE TOWER

Only useful up to about 19 miles, it was jettisoned 3 minutes, 18 seconds into the mission.

LUNAR MODULE

The Lunar Module was extracted from the top of the third stage before it was discarded about 4 hours, 17 minutes into the mission.

THIRD STAGE

A single J-2 rocket pushed Apollo 11 into Earth orbit. It would fire again to escape Earth orbit and send the spacecraft toward the Moon.

SECOND STAGE

Five J-2 rockets sent Apollo 11 closer to Earth orbit, burning another 260,000 gallons of liquid hydrogen and 80,000 gallons of liquid oxygen fuel in about 6 minutes.

FIRST STAGE

Five F-1 rocket engines ignited to produce 7.5 millions pounds of thrust. 318,000 gallons of liquid oxygen and 203,400 gallons of kerosene fuel were burned up in 2 minutes, 42 seconds to lift the spacecraft off the ground and send it most of the way toward space.

